



BILLING CODE 3510-22-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 665

[Docket No. 120416010-2476-01]

RIN 0648-BB84

Western Pacific Pelagic Fisheries; Revised Limits on Sea Turtle Interactions in the Hawaii Shallow-set Longline Fishery

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Final rule.

SUMMARY: In this final rule, NMFS revises the annual number of incidental interactions allowed between the Hawaii-based shallow-set pelagic longline fishery, and leatherback and North Pacific loggerhead sea turtles. NMFS also makes administrative housekeeping changes to the regulations relating to the fishery. The rule implements the incidental take statement of the current biological opinion on the fishery and clarifies the regulations.

DATES: This final rule is effective [insert date 30 days after date of publication in the FEDERAL REGISTER].

ADDRESSES: Copies of supporting documentation that provide background information on this final rule, identified by NOAA-NMFS-2012-0068, are available at www.regulations.gov.

FOR FURTHER INFORMATION CONTACT: Adam Bailey, Sustainable Fisheries, NMFS PIR, 808-944-2248.

SUPPLEMENTARY INFORMATION: The Hawaii-based shallow-set pelagic longline fishery targets swordfish primarily on the high seas of the North Pacific Ocean. The Western Pacific Fishery Management Council (Council) and NMFS manage the fishery under the Fishery Ecosystem Plan for Pelagic Fisheries of the Western Pacific Region. The plan provides for, among other things, a limited-access program, vessel- and gear-marking requirements, vessel length restrictions, Federal catch and effort logbooks, large restricted fishing areas around the Hawaiian Archipelago, a vessel monitoring system, and annual protected species workshops. The plan also requires the use of gear and techniques for the safe handling and careful release of protected species, i.e., sea turtles, seabirds, and marine mammals. NMFS may issue a maximum of 164 longline permits for the deep- and shallow-set longline fisheries in Hawaii combined, and about 25-30 vessels have been active in the shallow-set fishery in recent years. NMFS deploys an official observer on every shallow-set fishing trip (100 percent observer coverage).

The fishery occasionally and incidentally interacts with (hooks or entangles) protected species, primarily leatherback and North Pacific loggerhead sea turtles, but also other protected species. Consistent with the terms of a no-jeopardy

2004 NMFS biological opinion (2004 BiOp), the Council recommended and NMFS implemented a broad suite of sea turtle conservation and management measures for the fishery (69 FR 17329, April 2, 2004), including annual interaction limits for leatherback and loggerhead turtles. NMFS currently allows the fishery to interact with up to 16 leatherback and 17 loggerhead sea turtles per year; these limits directly manage the impacts of the fishery on sea turtles. If the shallow-set fishery reaches either limit, NMFS closes the fishery for the remainder of the year.

As required under section 7 of the Endangered Species Act (ESA), NMFS re-evaluated in 2012 the impacts of the continued operation of the fishery, as governed under the current suite of management measures (the proposed action), on marine species protected by the ESA (i.e., humpback whales, North Pacific loggerhead sea turtle distinct population segment (DPS), leatherback sea turtles, olive ridley sea turtles, and green sea turtles). NMFS concluded in a biological opinion dated January 30, 2012 (2012 BiOp), that the proposed action is not likely to jeopardize the continued existence of these five species, and is not likely to destroy or adversely modify designated critical habitat. The 2012 BiOp is an integral component to managing the shallow-set fishery, because the one-year incidental take statement (ITS, including reasonable and prudent management

measures, and terms and conditions) forms the basis for regulations that specify the annual limits on leatherback and North Pacific loggerhead sea turtle interactions with the fishery that are necessary to manage the impacts of the fishery on sea turtles.

In this final rule, NMFS is revising the annual limits on incidental interactions that may occur between the fishery and leatherback and North Pacific loggerhead sea turtles to 26 and 34 interactions, respectively. If the fishery reaches either of the interaction limits in a given year, NMFS would close the fishery for the remainder of that year.

NMFS is also making minor housekeeping changes to the longline regulations for clarity and consistency in terminology. NMFS is revising references to the "shallow-set component of the longline fishery" to read more simply the "shallow-set longline fishery." The sections of Title 50 of the Code of Federal Regulations that contain these changes include § 665.802 paragraphs (ss) and (tt), and § 665.813 paragraphs (b)(2)(i) and (b)(2)(ii), and paragraph (i).

Comments and Responses

On June 11, 2012, NMFS published a proposed rule and request for public comment (77 FR 34334). The comment period for the proposed rule ended on July 11, 2012. NMFS received approximately 2,270 comment submittals on the proposed rule.

About 2,180 were form letters associated with a non-governmental organization. Representatives of the longline fishery and non-governmental organizations provided additional comments, along with several private citizens. NMFS responds to comments received, as follows:

Comment 1: Increasing the allowable leatherback and North Pacific loggerhead sea turtle interactions from 16 to 26 and 17 to 34, respectively, would violate the ESA and cause jeopardy.

Response: NMFS disagrees. NMFS complied with all procedural and substantive requirements of the ESA for the proposed rulemaking. The NMFS Sustainable Fisheries Division consulted with the NMFS Protected Resources Division on the continued operation of the fishery with a gradual increase to a maximum of 5,500 sets per year, which resulted in the issuance of the 2012 BiOp. This final rule implements the ITS from the 2012 BiOp for leatherback and North Pacific loggerhead sea turtles. Both the 2012 BiOp and this rule comply with the ESA.

The agency must ensure that any activity that it authorizes is not likely, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species. To carry out this mandate, NMFS consults with the appropriate agency (either USFWS or NMFS) on any Federal action that it determines may affect ESA-listed

marine species. If the agency concludes that the proposed action is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat but, nonetheless, determines that the proposed action will result in the take of listed species, the agency must issue an ITS. The ITS establishes the allowable take of listed species that would otherwise be prohibited, and specifies those reasonable and prudent measures and terms and conditions that minimize the impact of such take.

In 2004, following a multi-year court-ordered closure, NMFS reopened the fishery under a suite of sea turtle mitigation requirements, including the use of large circle hooks and fish bait, a set certificate program limiting effort at 2,120 annual sets, and compliance with the ITS in a no-jeopardy 2004 BiOp. The 2004 BiOp also required annual limits on the allowable number of leatherback and loggerhead sea turtles hooked or entangled in longline fishing gear by the fishery, specified at 16 leatherback and 17 loggerhead sea turtles. If the fishery reached either limit, NMFS would close the fishery for the remainder of the year. The 2004 BiOp also required NMFS to place observers on 100 percent of shallow-set fishing trips.

In 2009, the Secretary of Commerce approved Amendment 18 to the Fishery Management Plan for Pelagic Fisheries of the Western Pacific Region. Amendment 18 removed the annual fishing effort

limit and associated set certificate program to allow the fishery to achieve optimum yield of swordfish and other species, consistent with National Standard 1 of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). Optimum yield means the amount of fish that will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities, and taking into account the protection of marine ecosystems. At the time of Amendment 18's approval, domestic and foreign swordfish landings in the North Pacific amounted to about 60 percent of an estimated maximum sustainable yield (MSY) of 22,284 metric tons (mt) as documented in Amendment 18. As analyzed under Amendment 18, the proposed action of 5,500 annual sets represents nearly the maximum annual level of effort that the fishery achieved during the five-year period 1994-1999, but was still below the 9,925 annual sets that would be necessary to produce MSY for the North Pacific swordfish stock, according to the 2004 stock assessment.

In 2008, NMFS concluded in a biological opinion (2008 BiOp) that, among other things, Amendment 18 would not jeopardize the existence of any ESA-listed sea turtles, and included an ITS that allowed up to 16 leatherback and 46 loggerhead sea turtle interactions before NMFS would close the fishery for the remainder of the year. Following litigation over the 2008 BiOp

with the Center for Biological Diversity, Turtle Island Restoration Network, and KAHEA: the Environmental Alliance, the ITS for leatherback and loggerhead sea turtles and that portion of the rule implementing the ITS were remanded to the agency and vacated. Under the terms of a consent decree, NMFS was to complete a new biological opinion on the fishery within 135 days of the USFWS-NMFS final decision on a petition to identify and list nine distinct population segments of loggerhead sea turtles. Consistent with the consent decree, NMFS issued the no-jeopardy 2012 BiOp, which evaluated the continued operation of the fishery under the management measures established by Amendment 18, with fishing effort at up to 5,500 sets annually and incorporated the best available scientific and commercial information. For example, NMFS used sea turtles interaction rates with the fishery obtained from 100 percent observer coverage from 2004-2011. In the 2012 BiOp, NMFS considered the effects of the action within the context of the 'Status of Listed Species' together with the 'Environmental Baseline' and the 'Cumulative Effects' to determine whether the action is likely to jeopardize the continued existence of listed species, or result in the destruction or adverse modification of designated critical habitat. NMFS concluded that the proposed Federal action is not likely to jeopardize the continued existence of any of the five listed species in the action area,

or destroy or adversely modify designated critical habitat. Accordingly, NMFS issued an ITS that, consistent with the expected level of take at 5,500 sets annually, allows interactions with up to 26 leatherback sea turtles and 34 North Pacific loggerhead sea turtles each year, along with reasonable and prudent measures designed to minimize the impact of fishery interactions.

With respect to leatherback sea turtles, the 2012 BiOp concluded that, "the incidental lethal (up to 4 nesting females annually) and non-lethal takes of leatherback sea turtles associated with the proposed action are not reasonably expected to cause an appreciable reduction in the likelihood of survival of the species." While acknowledging the adverse effect of any level of take and morality, NMFS found that the expected level of take from the overall action, including a small number of mortalities, is extremely small when considered together with all impacts described in the Status of the Species, Environmental Baseline, and Cumulative Effects sections, including other federally-authorized U.S. fisheries and foreign fisheries. The 2012 BiOp further noted that, even with the expected loss of up to four females annually, "the affected population is expected to increase" and would "remain large enough to retain the potential to contribute to species recovery." The BiOp noted that the "proposed action does not

appreciably impede progress on carrying out any aspect of the recovery program or achieving the overall recovery strategy," and that NMFS expects the "overall population to continue to grow and to maintain genetic heterogeneity, broad demographic representation, and successfully reproduce." The biological opinion concluded that the proposed action would not affect the leatherbacks' "ability to meet their lifecycle requirements and to retain the potential for recovery." Accordingly, the biological opinion concluded that the proposed action was "not reasonably expected to cause an appreciable reduction in the likelihood of survival or recovery of the species."

With regard to North Pacific loggerhead sea turtles, NMFS concluded that, although the proposed action would result in the mortality of up to one nesting female annually, "this level of mortality would present negligible additional risk to the North Pacific DPS" and would "not prohibit the DPS from stabilizing or increasing, nor would it prohibit the DPS from reaching a biologically reasonable FENA (females estimated to nest annually) based on the goal of maintaining a stable population in perpetuity." The biological opinion noted that, although the climate-based population viability assessment (PVA) model reveals a declining population over the next 25 years, "the population will remain large enough to retain the potential for recovery" and that the proposed action "does not appreciably

impede progress on carrying out any aspect of the recovery program or achieving the overall recovery strategy." In particular, NMFS expects that the overall population will remain "large enough to maintain genetic heterogeneity, broad demographic representation, and successful reproduction. The proposed action will have a small effect on the overall size of the population, and we do not expect it to affect the loggerheads' ability to meet their lifecycle requirements and to retain the potential for recovery."

Accordingly, under this final rule, NMFS will revise the annual limits on incidental interactions with leatherback from 16 to 26 interactions and North Pacific loggerhead sea turtles from 17 to 34 interactions. If the fishery reaches either of the interaction limits in a given year, NMFS would close the fishery for the remainder of that year (as required by current regulations). The revised limits are consistent with the 2012 BiOp, and are necessary to manage the impacts of the fishery on sea turtles while affording the fishery the opportunity to achieve optimum yield.

NMFS is allowing the fishery to interact with leatherback and North Pacific loggerhead sea turtles consistent with the ESA. The sea turtle interaction limits under which the fishery currently operates are the product of a court-approved settlement, based on an eight-year old no-jeopardy biological

opinion that analyzed the expected level of take resulting from a fishery capped at 2,120 annual sets. By contrast, the 2012 BiOp is based on the most current information available on sea turtle dynamics and demographics, and is supported by data from 100 percent observer coverage during 2004-2011 on the fishery's interactions, which NMFS used to analyze the effects of the fishery on sea turtle populations. In light of our improved understanding of sea turtle populations and the effectiveness of sea turtle mitigation measures in reducing both the frequency and severity of interactions in the fishery, NMFS appropriately authorized incidental take that exceeds the level (16 leatherbacks and 17 loggerheads) that was supported by judgments made in 2004, when the fishery was being reopened under an experimental regulatory regime that was untested in the Pacific where the fishery operates.

Finally, regarding compliance with the National Environmental Policy Act (NEPA), NMFS concluded that the action to revise the interaction limits for leatherback (to 26) and North Pacific loggerhead (to 34) sea turtles are within a range of interaction levels analyzed in the 2009 final supplemental environmental impact statement (FSEIS) for Amendment 18. NMFS also concluded that the 2012 BiOp, while containing more recent scientific information regarding the natural status of sea turtle populations, spillover effects, and fishery interactions

with green sea turtles, presented no substantial changes to the action proposed in Amendment 18, or new circumstances or significant information relevant to the environment or bearing on the action or its impacts that were not already considered in the 2009 FSEIS.

Comment 2: Current management of the shallow-set fishery is causing jeopardy to leatherback and North Pacific loggerhead sea turtles. Until there is consistent evidence that both the Western Pacific leatherback and North Pacific loggerhead populations are significantly recovering, allowing incidental take and mortality of either species would be irresponsible and contrary to the mandates of the ESA. Furthermore, the Ninth Circuit has made clear "even where baseline conditions already jeopardize a species, an agency may not take action that deepens the jeopardy by causing additional harm" (National Wildlife Federation v. NMFS, 524 F.3d 917, 930 (9th Cir. 2008)).

Response: NMFS disagrees that the action will cause jeopardy. Likewise, NMFS concluded that the fishery, operating under the current management plan, is not causing jeopardy to listed sea turtles. In the 2012 BiOp, on which this action is based (and which provides related background information), NMFS relied on the best scientific and commercial information available to reach a no-jeopardy conclusion for the proposed

action. Moreover, this action will not tip any sea turtle species into a state of jeopardy. See the response to Comment 1.

Comment 3: NMFS has an obligation under the ESA to ensure that fishery operations do not appreciably lower the species' chances of recovery, in light of the significant baseline impacts, such as fisheries bycatch, and cumulative threats to survival facing leatherbacks and loggerheads. Removing more sea turtles from shrinking populations that face growing threats from climate change and other impacts is not consistent with NMFS' duty to ensure the survival and recovery of these species.

Response: The NMFS and USFWS (1998) leatherback sea turtle recovery plan and loggerhead sea turtle recovery plan contain goals and criteria to achieve recovery including, but not limited to, monitoring of nesting activity, determining population trends, identifying stock boundaries, reducing incidental mortality in commercial fisheries, and ensuring protection of marine habitat. NMFS used the information from the recovery plans and other sources to develop the 2012 BiOp, including the baseline information and PVA models, and to reach the no-jeopardy conclusion.

As discussed in the 2012 BiOp, the proposed action will not impede progress on carrying out any aspect of the recovery plans or achieving the overall recovery strategies. The proposed action will not affect the majority of the recovery criteria or

the highest priority tasks. We expect the overall leatherback and North Pacific loggerhead sea turtle populations to continue to maintain genetic heterogeneity, broad demographic representation, and successfully reproduce. The proposed action will have a small effect on the overall size of the populations. Therefore, NMFS does not expect the lethal and non-lethal takes of leatherback and North Pacific loggerhead sea turtles to cause an appreciable reduction in the likelihood of both their survival and recovery in the wild.

Comment 4: NMFS should not increase the annual allowable, incidental interactions with leatherbacks and loggerheads, and NMFS should review the regulations and protect sea turtles from being caught and killed in the shallow-set fishery.

Response: The Western Pacific Fishery Management Council and NMFS regularly review domestic fisheries management regulations, including how they relate to sea turtles and other protected species during public and agency meetings and during the rulemaking process. See the responses to Comments 1 and 3.

Comment 5: Sea turtle bycatch in commercial fisheries is one of, if not the greatest, threat to the recovery of leatherbacks, and NMFS should be seeking ways to reduce takes of this species instead of increasing them in order to accommodate fishing interests. Fishing at the same rate will result in killing more turtles per unit of effort.

Response: Most sea turtle interactions occur in foreign fisheries that lack sea turtle bycatch deterrent and mitigation regulations. NMFS has implemented a suite of fishery management measures designed to minimize sea turtle interactions and post-interaction mortality. Since the fishery re-opened in 2004, the required use of circle hooks and fish bait has reduced sea turtle interaction rates by approximately 83 percent for leatherbacks and 90 percent for loggerheads compared to 1994-2002, when the fishery was operating without these requirements (Gilman et al. 2007). Gilman et al. (2007) also demonstrated that the requirements have greatly reduced incidents of serious injury, e.g., the number of deeply hooked sea turtles. Additionally, handling and release requirements reduce sea turtle mortality. This rule will not alter or diminish these protective requirements.

Comment 6: The proposed rule will result in an increased take and mortality of target and non-target fish, marine mammals (Bryde's whales, false killer whales, bottlenose dolphin, humpback whales, Risso's dolphins), and seabirds (black-footed albatross, Laysan albatross, short-tailed albatross). Moreover, the Hawaii swordfish fishery is among the fisheries with the highest amounts of bycatch in the U.S. despite its strict requirements on operations. This signals a need to reduce bycatch in the fleet, not increase bycatch under this action.

Response: Because there would be no substantial change to the operational requirements of this fishery, NMFS does not expect this rule to affect the catch, interaction, and discard mortality rates of any fish stocks or protected species. NMFS does not expect bycatch rates to increase beyond the levels analyzed in the 2009 FSEIS. As described in the 2009 FSEIS, NMFS estimates fish bycatch in this fishery to be about 6-7 percent of the annual catch. NMFS does not expect substantial changes to the operation of the fishery in terms of fishing effort, amount of swordfish catch, fishing methods and gear, location of fishing effort (action area), capture rates of target, non-target, and bycatch species, or impacts to their habitats that were not already considered in the 2009 FSEIS. Discard mortality for many species is unknown, but is not expected to increase because of the increase in the sea turtle interaction limits. The fishery lands and sells many of the fish species caught. Therefore, the fishery optimizes the use of most of the resources encountered. The fishery will continue to use the sea turtle, seabird, and marine mammal deterrents and mitigation measures that have effectively reduced and mitigated harm to incidentally-caught species.

The only ESA-listed seabird that has the potential to interact with the fishery is the short-tailed albatross. Observers have not recorded any short-tailed albatross

interaction with the fishery since NMFS began monitoring the fishery with observers in 1994. On January 6, 2012, the USFWS issued a no-jeopardy biological opinion for the fishery. The fishery will continue to use proven seabird deterrents and mitigation measures that have effectively reduced bycatch.

Comment 7: The proposed rule should be modified to: establish effort limits on the number of sets to minimize the bycatch of other non-target organisms; maintain observer coverage of no less than 100 percent in the shallow-set fishery; establish time/area closures; dynamic area management; reduction of fishing effort; establish an incidental take limit of one leatherback or loggerhead, such that the fishery is closed upon reaching the one interaction limit; and shortening lines.

Response: The suggested modifications are outside the scope of this rule, which revises the annual interaction limits for leatherback and North Pacific loggerhead sea turtles applicable to the fishery and continues the operation of the fishery under current requirements. Amendment 18, approved by the Secretary of Commerce and implemented by NMFS in 2010, considered and analyzed a broad range of alternatives, such as effort limits and time and area closures. See Amendment 18 for further information. The annual interaction limits in this rule are consistent with the ITS in the 2012 BiOp, which analyzed the continued operation of the fishery at a maximum annual effort of

5,500 sets annually. Since the ESA requires NMFS to consider the best available scientific and commercial information, NMFS had no basis with which to impose an annual interaction limit of one leatherback or loggerhead. Furthermore, an ITS of one would be contrary to the purpose of Amendment 18, which is to allow the fishery to achieve optimum yield, while continuing to protect sea turtles and other ESA-listed species. This action will maintain proven mitigation measures currently applicable to the fishery, such as circle hooks and safe handling techniques for protected species. This action does not change the 100 percent observer coverage for the fishery.

Comment 8: NMFS admits in the 2012 BiOp that the direct effects of the proposed action have a "detectable," that is, appreciable, effect on the loggerhead sea turtle population. This meets the regulatory definition of an action that is likely to jeopardize the species.

Response: The terms detectable and appreciable are not synonymous in the context of the ESA. The 2012 BiOp stated that the proposed action would have a detectable influence on North Pacific loggerheads but, after analyzing the status of the species, environmental baseline, effects of the action, and cumulative effects together, NMFS concluded that the proposed action would not likely jeopardize the survival and recovery of the species. Jeopardize means to engage in an action that

reasonably would be expected to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.

Comment 9: NMFS determined that the only way the Hawaii shallow-set longline fishery could reopen under the 2004 BiOp without jeopardizing leatherbacks and loggerheads would be to operate under the following restrictions: an effort limit of 2,120 sets annually, and interaction limits of 16 leatherbacks or 17 loggerheads, either of which, if reached, would result in the immediate closure of the fishery (72 FR 46608; August 21, 2007).

Response: The 2004 BiOp analyzed the proposed action recommended by the Council, including a limit of 2,120 shallow sets annually, among others. The Council based their recommendations on sea turtle interaction rates from longline fishing experiments in the Atlantic from 2001-2003 that tested sea turtle mitigation gear and safe handling techniques to find interaction limits applicable to the model fishery. That process resulted in interaction limits of 16 leatherbacks and 17 loggerheads. These numbers did not represent the upper limit of interactions that would avoid jeopardizing these species, but rather they represented the number of anticipated interactions associated with the 2004 proposed action. While the 2004 BiOp

concluded the interaction limits would not jeopardize these species, it did not conclude that these were the only interaction rates allowable under the ESA, because NMFS based the information on Atlantic experimental results.

Based on 100 percent observer coverage from 2004-2011, the 2012 BiOp found that actual interaction rates around Hawaii were lower for leatherbacks and loggerheads, compared to the Atlantic experiments from 2001-2003. Relying on observed sea turtle interaction rates from the Hawaii shallow-set fishery from 2004-2011, the 2012 BiOp multiplied the proposed action of 5,500 sets per year by the average observed interaction rates per set to determine the interaction limits of 26 and 34, for leatherbacks and North Pacific loggerheads, respectively. Using the best available scientific and commercial information, the 2012 BiOp similarly found that the continued operation of the fishery with 5,500 sets annually would not likely jeopardize the continued existence of any ESA-listed species in the wild.

Comment 10: NMFS should not increase the sea turtle interaction limits because both leatherbacks and North Pacific loggerheads species are "critically endangered" and likely to decrease in the future.

Response: NMFS disagrees. NMFS evaluated the impacts of the continued operation of the fishery on leatherback and North Pacific loggerhead sea turtles, and concluded in the 2012 BiOp

that the action would not likely cause jeopardy. This final rule conforms to the ITS that was prepared in accordance with ESA. See the response to Comment 1 regarding compliance with ESA and the no-jeopardy conclusion in the 2012 BiOp.

Comment 11: In the context of the ESA, the proposed rule would appropriately continue to authorize the negligible levels of incidental leatherback and loggerhead take experienced in the shallow-set fishery. This process and the resulting agency findings convincingly and conclusively demonstrate that the effects of the shallow-set fishery on leatherback and North Pacific loggerhead sea turtle populations are negligible and that, for purposes of the ESA, the shallow-set fishery is not likely to jeopardize the continued existence of either species.

Response: NMFS agrees that this action is not likely to jeopardize the continued survival and recovery of any ESA-listed species in the wild.

Comment 12: In spite of conservation efforts for the small number of hawksbill sea turtles nesting and foraging around Hawaii, NMFS wants to increase the interaction limit for this species.

Response: This rule does not address interaction limits for hawksbill turtles; it only revises the annual interaction limits for leatherback and North Pacific loggerhead sea turtles. There has been no recorded interaction with a hawksbill sea turtle in

the fishery, and the probability of a hawksbill interaction is extremely unlikely. If the fishery does interact with a hawksbill sea turtle, NMFS would re-examine the effects of the fishery on this species.

Comment 13: Explain how NMFS enforces the interaction limits, and provide the historical annual numbers of interactions and fishery closures. The reported numbers of interactions are low or underreported.

Response: NMFS observers document sea turtle interactions in the fishery. Because there is an observer on each trip, NMFS is able to determine the number of turtles that interact with the fishery and does not believe numbers are low or underreported. In addition to observers, fishing vessel captains are required to report any interaction with protected species in Federal logbooks for all fishing trips. If the fishery reaches an annual interaction limit, NMFS closes the shallow-set longline fishery north of the Equator through the end of the calendar year via direct and immediate notification (e.g., satellite telephone, email, etc.) to vessel owners, permit holders, captains, and observers. NOAA's Office of Law Enforcement investigates potential violations of the ESA.

In 2006, the fishery reached the interaction limit for loggerhead sea turtles and, in 2011, the fishery reached the limit for leatherback sea turtles. Both times, NMFS closed the

fishery for the rest of the calendar year. For more information on annual sea turtle interactions in the shallow-set longline fishery, see the 2012 BiOp and www.fpir.noaa.gov/SFD/SFD_turtleint.html.

Comment 14: There is no justification for setting kill limits that affect survival numbers, genetic diversity, unreported bycatch, and other unknown factors.

Response: Under ESA, NMFS may authorize the fishery to interact with protected species that would otherwise be prohibited, if conducted pursuant to a lawful activity, and if conducted in accordance with the terms and conditions of a no-jeopardy biological opinion and ITS. The annual interaction limits specified in this rule conform to the ITS in the 2012 BiOp. NMFS believes most interactions do not result in mortality. In fact, since 2004, NMFS has no documented direct observation of any sea turtle mortality in the shallow-set fishery with 100 percent observer coverage. However, in the 2012 BiOp, NMFS conservatively estimated post-interaction mortality rates of 22.0 percent for leatherbacks and 18.6 percent for North Pacific loggerheads, based on factors such as whether there is trailing gear, the placement and location of the hook, degree of entanglement, and physical condition. In addition, this rule does not change the 100 percent observer coverage for the fishery.

Comment 15: The proposed rule correctly sets annual interaction limits for leatherback and North Pacific loggerhead sea turtles that are consistent with the agency's recommendations, as set forth in the 2012 BiOp.

Response: NMFS agrees.

Comment 16: The proposed action is similar to NMFS' failed attempt in the 2008 BiOp and Amendment 18 where NMFS proposed to raise the annual incidental interaction limit for leatherback sea turtles from 16 to 17, and the limit for loggerheads from 17 to 46.

Response: The action analyzed under Amendment 18 and the 2009 FSEIS, and subsequently implemented by NMFS in 2010, raised the annual loggerhead interaction limit from 17 to 46, but did not change the interaction limit for leatherbacks. Under the process established by Amendment 18, interaction limits are to be established consistent with a biological opinion prepared under section 7 of the ESA. The 2012 BiOp satisfies this requirement. See the response to Comment 1.

Comment 17: The Magnuson-Stevens Act requires NMFS to manage fisheries responsibly to minimize bycatch, protect habitat, and prevent overfishing. As such, it would be irresponsible and illegal of NMFS to approve this proposed rule. NMFS continues to promote non-sustainable longline and drift

gillnet fishing gear, violating laws and continually eroding the credibility of fishery management agencies.

Response: In addition to minimizing impacts on protected species, NMFS is required to manage fisheries sustainably by achieving optimal yield. The Secretary of Commerce approved, and NMFS implemented, the management program established in Amendment 18 to allow the fishery to achieve optimal yield of the swordfish stock, which is healthy, not subject to overfishing, and underexploited. The fishery ecosystem plan for pelagic species manages interactions and post-interaction mortality by continuing mitigation measures that have a proven effectiveness, including the use of large circle hooks, fish bait, and safe handling gear and procedures for protected species. The current action does not affect NMFS' ability to protect essential fish habitats and prevent overfishing. NMFS monitors the fishery to detect changes and would work with the Council to develop management measures if overfishing ever becomes a concern. An incidental benefit of Amendment 18 may be to provide positive benefits to non-target stocks. For example, the reduction in regulatory barriers may lead fishermen in the deep-set fishery to participate in the shallow-set fishery, thereby reducing fishing pressure on bigeye tuna stocks, which are experiencing overfishing. NMFS has no information indicating that the fishery is not operating sustainably.

In 1992, the United Nations banned high seas drift gillnet fishing. Drift gillnets are not allowed in Federal waters around Hawaii or other U.S. Pacific Islands. The USA is a recognized leader in fisheries management worldwide and the Hawaii shallow-set longline fishery is among the most strictly regulated and sustainable suppliers of fresh seafood. NOAA's Office of Law Enforcement investigates potential violations of all applicable laws.

Comment 18: Hawaii's sea turtles and monk seals are important for tourism, because people enjoy diving and swimming with them. There are not enough of them, and they have been on the decline in Hawaii. Do not change how many sea turtles can be killed by lines or hooks before stopping fishing.

Response: Hawaii tourists enjoy seeing green sea turtles and, occasionally, hawksbill sea turtles. The numbers of nearshore green sea turtles have been increasing in Hawaii for over three decades, and the recent trend in the numbers of nesting hawksbill sea turtles in Hawaii is stable. The shallow-set fishery operates hundreds of miles offshore in deep ocean waters where the density of green sea turtles is lower. The fishery interacted with six green sea turtles from 2004-2011, and there have been no reported or observed interactions with hawksbills. Based on very low densities of hawksbill sea turtles in the action area, and the lack of any interactions with

longline fisheries around Hawaii, an interaction with a hawksbill sea turtle is extremely unlikely.

The fishery also will not likely affect monk seals. State of Hawaii and Federal laws protect sea turtles and monk seals; longline fishing is not allowed in nearshore waters around Hawaii, from the shoreline to about 25 to 75 nautical miles from shore.

Comment 19: The United States has the power and influence to persuade other nations to help save sea turtles from drowning in fishing nets. There should be regulation on what kinds of nets the fisheries can use. Turtle hatchback nets have seen some success with fisheries, so that could be a place to start. We cannot afford to wait and must lead by educating and teaching other countries that all vessels must be required to have turtle excluder devices (TEDs). Our government must check to make sure that the TEDs are in place and working.

Response: NMFS agrees, and works to develop fishing gear that conserves protected resources to the extent practicable. Fishing with nets, including trawls, is prohibited in Federal waters around Hawaii and other U.S. Pacific Islands. NMFS is also active in efforts to reduce interactions with protected resources in fisheries worldwide. The U.S. participates in international fisheries management organizations (RFMOs) worldwide, including the Western and Central Pacific Fisheries

Commission (WCPFC) and Inter-American Tropical Tuna Commission (IATTC) in the Pacific. Due to efforts by the U.S. in these RFMOs, proven sea turtle bycatch mitigation measures required in Hawaii are now required in other countries and by RFMOs. NMFS continues to collaborate with foreign agencies and conservation organizations, to develop conservation measures and responsibly manage fisheries.

Comment 20: The Magnuson-Stevens Act and MMPA provide a process by which NMFS must identify nations whose fishing practices result in the bycatch of protected living marine resources, including sea turtles, and certify whether each nation or, in the alternative, imported shipment, meets U.S. requirements for bycatch reduction. Specifically, "were harvested by practices that do not result in bycatch of protected marine species, or were harvested by practices that...include mandatory use of circle hooks, careful handling and release equipment, and training and observer programs..." Therefore, NMFS should restrict swordfish imports from fisheries that observe lower sea turtle and marine mammal conservation standards and, therefore, effectively reduce protected species mortality.

Response: The purpose of this rule is to implement the ITS from the 2012 BiOp for the shallow-set fishery, consistent with Amendment 18. Accordingly, the comment is outside the scope of

this rule. However, NMFS works to identify fisheries that have high incidences of interactions with sea turtles and other protected species, and is actively engaged in efforts to manage fisheries bycatch through membership in international conventions such as WCPFC and IATTC.

Comment 21: The existing fishery, as regulated since 2004, has reduced loggerhead and leatherback bycatch by 97 [sic] percent and 83 percent, respectively, from prior levels, and every loggerhead and leatherback sea turtle that has interacted with the fishery during this time has been released alive.

Response: NMFS agrees, and this final rule will continue these successful measures.

Comment 22: The capture and entanglement of marine life on longlines reduces the efficiency of fishing operations and adds needless costs. NMFS must consider the negative economic impacts on the fishery to increased levels of sea turtle take, in addition to the potential benefits that have been described.

Response: When these measures were implemented, NMFS considered efficiency in utilization of fishery resources, minimizing costs, and bycatch, as required under the Magnuson-Stevens Act. NMFS has no information to conclude that this rule will impose additional costs on fishery participants or increase inefficiency in utilizing fishery resources, and NMFS certified under the Regulatory Flexibility Act to the Small Business

Administration that this action would not have a significant economic impact on a substantial number of fishing businesses.

Comment 23: The effects analysis in the 2012 BiOp ignores sub-lethal effects of hooking or entangling turtles, which can render them less able to feed, swim, or avoid predation. Instead, the biological opinion's jeopardy analysis focuses on how many of the interactions between turtles and longline gear will result in mortality.

Response: NMFS based this rule on the best available scientific and commercial information, including an analysis of sub-lethal effects and post-interaction mortality, as documented in the 2012 BiOp. While NMFS cannot predict whether a sea turtle will breed, swim, feed, or avoid predation after an interaction, NMFS evaluates whether the injuries are serious enough as to make survival unlikely, using science-based criteria.

Comment 24: Provide clarification for the proposed regulation in § 665.813 (2)(i) that states, as soon as practicable the shallow-set longline fishery shall be closed. This vague statement seems like it could be taken advantage of quite easily if requirements or punishment were lacking.

Response: Because of the inherent difficulty of communicating with vessels at sea, it is not always possible to provide immediate notice of a fishery closure to participants. However, NMFS provides notice to fishermen as soon as

practicable in several ways. Constructive notice, in the form of a notification in the Federal Register, and actual notice via telephone and email to vessels owners on land and vessel captains at sea. This process to publish a notice in the Federal Register may take several days. NMFS places telephone calls and text messages to vessel owners and captains much more quickly. For example, when NMFS closed the fishery in 2011, we were able to reach all owners and captains, either directly or through observers on board the vessels, within several hours of reaching the interaction limit. NOAA's Office of Law Enforcement investigates potential violations of all applicable laws.

Comment 25: The proposed rule explained that there was no significant economic impact, yet there was no assessment provided. This begs the question of why revise the amount of turtle interactions if it means little to no impact on the economy? If there is no economic gain, then sea turtles should not be placed in more danger.

Response: This final rule will provide the swordfish fishery with the opportunity to achieve optimal yield for a fishery resource that is currently healthy and underexploited, while still maintaining important conservation and management safeguards for protected species. NMFS prepared a mandatory Regulatory Impact Review (RIR) under Executive Order 12866 on April 13, 2012, and made it available to the public during the

public comment period at www.regulations.gov as document NOAA-NMFS-2012-0068-0005. In the RIR, NMFS analyzed the economic impacts on commercial fishery participants, and determined that the impacts would not be significant. This determination addresses the economic burden on the economy and the fishery, and does not suggest that the action would not have positive economic results.

Comment 26: The biological opinion, record of environmental consideration, and proposed rule did not recognize the proposed expansion of the California drift gillnet fishery discussed at the Pacific Fishery Management Council meeting in March 2012. The impacts to Western Pacific leatherback populations as a result of increased take in the American Samoa longline fishery as well as the California drift gillnet fishery must be considered and mitigated before making any determinations on increased take in the Hawaii swordfish longline fishery.

Response: NMFS disagrees. Actions taken by the Pacific Council in March 2012 relating to the California drift gillnet fishery and Pacific leatherback conservation area are preparatory and/or preliminary as to potential future action, if any, that the Pacific Council and NMFS might take. Given the uncertainty regarding the nature and scope of any future Federal action, or whether any Federal action will be taken at all, NMFS is unable to predict the potential effects any proposal from the

Pacific Council on the environment or protected species at this time.

With respect to the American Samoa longline fishery, NMFS considered, under a separate 2010 biological opinion, the impact of the American Samoa longline fishery on sea turtles. Since implementation of gear requirements to protect turtles, NMFS has not documented any additional sea turtle interactions in the American Samoa longline fishery. Although NMFS has taken action to mitigate the impact of the American Samoa longline fishery on sea turtles, we know of no requirement to demonstrate effectiveness of those measures prior to authorizing the continued operation of the Hawaii shallow-set fishery.

Comment 27: The proposed action to allow 34 loggerhead sea turtle takes, making up seven mortalities a year, would be an increase in the government-authorized killing of what is now an endangered distinct population that, according to the climate-based PVA model, is clearly at high risk of extinction. The classical PVA model portrays an optimistic look for the loggerhead population and makes unrealistic assumptions that all environmental and human caused impacts will remain constant. NMFS discounts the classical PVA model because it is driven primarily by the last three years of loggerhead nesting, not the long-term trend showing a significant decline in the population.

Therefore, NMFS should not allow an increase in sea turtle interaction levels.

Response: The 2012 BiOp is largely a qualitative evaluation of the general direction and magnitude of the probabilities projected in the climate-based PVA model, informed by relevant information from other sources. NMFS acknowledges that both the classical and climate-based approaches have limitations. Although the classical PVA model projected robust growth of the loggerhead population based on a linear projection of nesting data, we discounted that model specifically because the classical PVA model predicts future population sizes in linear fashion when many species, especially sea turtles, have populations that oscillate over time due to factors for which the model cannot account.

The climate-based PVA model, with results that differed from the classical PVA model, was more rigorous in applying data from the Pacific Decadal Oscillation (PDO) and, therefore, more useful to the analysis. According to Van Houtan (2011), the climate-based PVA model captures climate dynamics through two mechanisms: juvenile recruitment and breeding remigration. This model recognizes that females do not breed annually; rather, breeding occurs when ocean conditions are sufficient for females to reproduce. In addition, juveniles are considered more susceptible to oceanographic variability as they have a limited

ability to exploit their surroundings for food. Van Houtan and Halley (2011) concluded that loggerhead nesting varies synchronously within regions, suggesting that climate pressures operating over large geographic areas and time series account for periods of high and low abundance.

Considering the above, however, and given that a small number of sea turtle experts only recently developed the climate-based PVA model and that it uses a relatively short 25-year predictive period, we were cautious not to rely completely on any one model. NMFS chose to proceed carefully with a quantitative and qualitative empirical evaluation of the climate-based PVA model, along with inputs from multiple experts and sources. Based on this approach, we predicted an oscillating decline of the population below a 50-percent quasi-extinction threshold within one generation (25 years) due largely to climate-forcing factors. As noted in the 2012 BiOp, this threshold does not mean that the population will become functionally extinct; rather, it is an assumed fraction of the current population size (in this case, 50 percent) by which the population projections were modeled.

The fishery's impact, though detectable, would not appreciably reduce the likelihood of the North Pacific loggerhead's survival and recovery, in that the population would remain large enough to maintain genetic heterogeneity, broad

demographic representation, and successful reproduction. In particular, with an adult female nesting population conservatively estimated at 7,100, the effect of the removal of one adult female under the proposed action (0.35 percent of the estimated total population over 25 years) would be insignificant, and that the additional risk to the DPS that would result from loss of one adult female annually is negligible. NMFS has no empirical basis with which to leave the current 16 leatherback and 17 loggerhead sea turtle incidental take levels in place.

Comment 28: Data input into both the classical and climate-based PVA models from converting juveniles to adult equivalents using central estimates of North Pacific loggerhead sea turtle age (13 years old) and post-hooking mortality (18.6 percent) is problematic and overly risky. NMFS wrongly assumes that 100 percent of the mortalities are juveniles for calculating the adult equivalent mortality after stating that 96 percent of mortalities are juveniles from direct observation of carapace length. Turtles may be older and closer to reproductive age than estimated, and there is substantial uncertainty in the post-hooking mortality estimates and actual mortality could be much greater.

Response: NMFS relied on the best scientific and commercial information available in developing the 2012 BiOp, which formed

the basis for this final rule. As discussed in section 7 of the BiOp, 96 percent of loggerheads captured in the fishery were juveniles with the most common carapace length being about 57 cm. Based on studies conducted on loggerhead turtles in the Atlantic, this size turtle is equivalent to a 13-year old turtle (there are no size-at-age comparisons for loggerhead turtles in the Pacific). In addition, NMFS used three different survival rates established for turtles between the ages of 13 and 25. NMFS applied a conversion formula to determine the annual effect of the action on adult females. In order to estimate adult equivalents that will be affected by the action, survival rates (Snover 2002) were applied to three distinct life stages that would occur between age 13 and the age at first reproduction estimate of 25 years (2012 BiOp Figure 4c and Table 6; Van Houtan 2011). The three survival rates applied to convert juveniles to adults were 0.81, 0.79, and 0.88 (Snover 2002, Van Houtan 2011). Seven juvenile mortalities result in the annual removal of the equivalent of one adult female (0.31 adult females round to 1) (2012 BiOp Figure 4c and Table 6; Van Houtan 2011), which included that female's reproductive potential and the lost reproductive potential of the unborn hatchlings. NMFS rounded this number to one, because the mortality of a fraction of a turtle is not biologically realistic and, therefore, made the estimate much more precautionary.

The calculation of adult female equivalents was rounded to the nearest significant digit, which conservatively accounts for variation in percentage of adult female equivalents. The difference to the mortality estimate if we included four percent of adults (assuming 96 percent are juveniles) in our calculation would mean an additional 0.13 adult female equivalent, which when added to 0.43 would still round up to 1 adult female mortality annually. Therefore, this single adult female equivalent mortality per year is a precautionary estimate that accounts for variation in the model's underlying assumptions.

NMFS derived the post-interaction mortality rates used in the effects analysis from a workshop that developed criteria for assigning post-interaction mortality values based upon identified variables, including hook placement, degree of entanglement, and physical condition (Ryder et al. 2006). NMFS relied on a conservative and established approach for applying its guidance on sea turtle post-interaction mortality rates in developing the 2012 BiOp. Therefore, the mortality rates did not appear to be over- or underestimated.

Comment 29: The climate-based PVA model is inconsistent with empirical nesting data, and the results conflict strongly with the classical PVA model. Therefore, there is no justification for NMFS using the climate-based PVA model as a

basis for a no jeopardy finding, as it is directly contrary to the best available science.

Response: The 2012 BiOp analysis is largely a qualitative evaluation of the general direction and magnitude of the probabilities projected in the climate-based PVA model, informed by other relevant information from other sources. NMFS acknowledged that both the classical and climate-based approaches have limitations. For example, although the classical PVA model projected a decline in the leatherback population based on a linear projection of nesting data, NMFS discounted the model because of its inherent limitations. In particular, NMFS noted that the classical PVA model predicts future population sizes in linear fashion when many species, especially sea turtles, have populations that oscillate over time due to factors for which the model cannot account. NMFS found that the climate-based model, which differed from the classical PVA model, was more rigorous in applying actual data (i.e., PDO data) and, therefore, more useful to our analysis. According to Van Houtan (2011), the climate-based PVA model captures climate dynamics through two key turtle life stages: neonates and nesting females. This model recognizes that females do not breed annually, but when ocean conditions are sufficient for females to reproduce. In addition, juveniles are considered more susceptible to oceanographic variability as they have a limited

ability to exploit their environs for food. Van Houtan and Halley (2011) concluded that sea turtle nesting varies synchronously within regions, suggesting that climate pressures operating over large geographic areas and time series account for periods of high and low abundance.

However, given that the climate-based PVA model was only recently developed by a small number of sea turtle experts, and its relatively short 25-year predictive period, NMFS was cautious not to rely completely on any one model, and elected to proceed carefully with a quantitative and qualitative empirical evaluation of the climate-based PVA model along with inputs from multiple experts and sources, where available. Based on our analysis, NMFS anticipates a rebound of the leatherback population due to decadal oscillations in the North Pacific Ocean and that the number of nesting females will increase over 80 percent by the year 2035. Further, when NMFS analyzed the proposed action with the annual mortality of four adult females, there is a measureable loss to the population, but the population still grows. We determined that the proposed action would not appreciably reduce the likelihood of survival and recovery of the species in the wild. We expect the overall population to continue to grow and to maintain genetic heterogeneity, broad demographic representation, and successful reproduction. Further, we expect the proposed action to have a

small effect on the overall size of the population, and we do not expect it to affect the leatherbacks' ability to meet their lifecycle requirements and to retain the potential for recovery.

Comment 30: NMFS limits jeopardy analysis to only the next 25 years and does not adequately assess long-term threats, extinction risk, or jeopardy, for a long-lived species like sea turtles. Recent studies highlight the serious threats future climate change poses to endangered turtles, threats that would only be compounded by the substantial increases in fishery-related take the agency proposes to authorize. See Conner, 848 F.2d at 1454 (NMFS "cannot ignore available biological information"); see, e.g., Saba et al. (2012); Tomillo et al. (2012). Both of these peer-reviewed studies project climate change-related impacts to the year 2100, demonstrating that NMFS could have, but failed to, model such impacts far beyond the 25 years with which the agency contented itself.

Response: The ESA requires NMFS to make predictions only as far as it can adequately explain reliance on the data. NMFS evaluated the effects of this rule, as analyzed in the 2012 BiOp, over the next 25 years, which corresponds to the forecast limitations of the climate-based PVA model. The climate-based model uses the historic nesting data for North Pacific loggerheads, but then adds the long-term dynamics of climate forcing on the population. Van Houtan and Halley (2011)

demonstrated that climate plays a primary role in juvenile recruitment for North Pacific and Northwest Atlantic loggerhead populations. Their model accurately accounts for the last several decades of nesting trends at various spatial scales in two different populations and accounted for annual fluctuations over the 20-30 years. NMFS relied on the best available information in projecting out to 25 years. For further information on the reliance on the PDO, see Van Houtan and Halley (2011) and Van Houtan (2011).

Papers referenced by the commenters regarding Eastern Pacific leatherbacks only evaluate land-based climate change effects, such as sand temperature on hatchlings, which is why they could project out to 2100. The climate-based PVA model relies on the strong correlation that exists between sea turtle population trends and the Pacific Decadal Oscillation (PDO). The PDO cannot be predicted beyond what information we now have, and is currently limited to the next 25 years; therefore, the model cannot forecast climate-forcing population trends beyond that period. The correlation between hatchling success and favorable oceanic conditions prior to nesting is poorly understood, and NMFS cannot directly translate effects on the Eastern Pacific leatherback to the Western Pacific leatherback population. Since 1995, none of the genetic samples collected from interactions in

the shallow-set fishery is from the Eastern Pacific leatherback population.

Comment 31: The climate-based PVA model does not account for cumulative effects of other impacts. It does not include other anthropogenic mortalities (e.g., bycatch in other fisheries), rather just the direct effects of the proposed action.

Response: NMFS based this rule on the 2012 BiOp, which used a climate-based PVA model that examined bottom-up climate forcing at two turtle life stages, both with and without the proposed action. The 2012 BiOp considered other anthropogenic threats and sources of mortality, for example, bycatch in other fisheries, in Status of the Species, Environmental Baseline, and Cumulative Effects sections. The no-jeopardy determination in the opinion is based on the effects of the action within the context of the species' status, environmental baseline, and cumulative effects to determine if the proposed action analyzed in the 2012 BiOp can be expected to have direct or indirect effects on threatened and endangered species that appreciably reduce the likelihood of surviving and recovering in the wild by reducing their reproduction, distribution, or numbers.

Comment 32: NMFS failed to consider information (e.g., Tapilatu et al., unpublished) that indicates that leatherback sea turtles are declining at a much faster rate than analyzed in

the 2012 BiOp and are at imminent risk of extinction. NMFS also fails to acknowledge that its own analysis reveals that leatherback sea turtles would experience a much higher rate of decline and that the proposed action is deepening the baseline conditions that are causing jeopardy.

Response: This rule is based on analyses in the 2012 BiOp, which considered all relevant information relating to leatherback sea turtle population status and trends, including Tapilatu et al. (unpublished). The 2012 BiOp, Status of the Species section for leatherbacks specifically acknowledged anecdotal reports from the early 1980s suggesting declines in leatherback nesting prior to reliable nest counts beginning in 1993. In addition, the 2012 BiOp considered information relating to the nesting population of the Jamursba-Medi component of the Western Pacific leatherback population from 1993-2010, which includes the Bird's Head peninsula as addressed by Tapilatu et al. (unpublished) and others, with the overall trend slightly declining. See also the responses to Comments 1, 2, and 3.

Comment 33: A central theme throughout the BiOp is the argument that allowing U.S. fishermen to kill more leatherback and loggerhead sea turtles will actually save more turtles globally in the long run. NMFS has specifically failed to demonstrate that production in other countries has increased or will increase to meet U.S. demand. It is entirely reasonable to

conclude that international fisheries for swordfish will operate, if not expand, regardless of the Hawaii shallow-set fishery. Conversely, there is no empirical evidence to suggest that increased domestic production will result in decreased fishing effort by other swordfish producing nations. Ultimately, the Chan and Pan (2012) results depend on their underlying assumption that sea turtle interaction rates are higher from the countries from which the U.S. imports swordfish, not on actual data showing that this necessary condition holds. NMFS does not present clear evidence that increases in U.S. swordfish production lead to reductions in overall global swordfish effort. Given that the Hawaii shallow-set fishery has not hit its set limit even once since 2004 (and hit the cap on turtle take in only two years) and annual effort has varied from a low of 135 in 2004 to a high of 1,875 sets in 2010, foreign fishermen have had no way of knowing what level of domestic fishing would take place in any given year since the fishery reopened.

Response: In the 2012 BiOp, NMFS carefully evaluated the best available scientific and commercial information regarding the beneficial spillover effects from the Hawaii shallow-set fishery. The analysis considered whether sea turtles are affected, if and when the production by foreign fleets (that are known to have higher turtle interaction rates) displaces U.S.

swordfish production (Hawaii represented 74 percent of all U.S. Pacific landings before 2001) in the same general area of the central and North Pacific. Chan and Pan (2012) conducted a new study of production displacement that was not considered by Rausser et al. in 2008, and presented empirical data to establish that, while U.S. swordfish production in the Pacific Ocean declined, foreign production increased. Between 1991 and 2009, swordfish production in the eastern central and northeast Pacific, where the Hawaii shallow-set fishery operates, had been stable or declining slightly, whereas production in the western central and northwest Pacific had trended upward, particularly after 1996. Using data on 1999-2009 global swordfish production from the Food and Agriculture Organization of the United Nations, the authors demonstrated that the foreign production in the central and North Pacific increased when the U.S. swordfish production decreased, and vice versa. The authors also used these empirical data to measure the degree of swordfish production displacement between U.S. and non-U.S. fishermen, and found the degree of displacement to be one-to-one. Chan and Pan (2012) incorporated variability and randomness in production throughout the time series. The result of the model showed fishing effort and capacity may be affected by regulation and, therefore, demonstrated a correlation of swordfish production displacement between foreign and U.S. fisheries. Based on this

analysis, NMFS identified spillover effects as potential indirect effects of the proposed action. NMFS did not, however, incorporate these beneficial spillover effects in our quantitative PVA models, and NMFS reached the no-jeopardy conclusion both with and without the beneficial effects of spillover, formulating an ITS only on the expected adverse effects of the proposed action.

Comment 34: The NMFS 2012 Technical Memorandum on spillover effects is founded on a number of unsupported assumptions, not on any actual bycatch or observer or swordfish landings data from any foreign fisheries. The populations of sea turtles in question are not globalized resources. The take of an Atlantic leatherback turtle does not have the same effect on the Western Pacific population of leatherback turtles as the take of a Western Pacific leatherback turtle. Therefore, the assumption that sea turtle bycatch has the same biological effect regardless of where it occurs is markedly incorrect at a fundamental biological level. In other words, it does matter where the sea turtles are caught; therefore, they cannot be considered "globalized resources." Further, Chan and Pan (2012) summarize their argument in terms of total number of turtles, even though there are at least four different species representing dozens of different populations. Also, there is no evidence that if the U.S. swordfish supply did in fact saturate

the market, that foreign fleets would not simply sell to other markets where there is a demand for swordfish, casting considerable doubt on the market transfer effect. If NMFS has determined that U.S. demand for swordfish is causing harm to sea turtle populations globally, it has the responsibility to engage in consumer awareness campaigns aimed at reducing domestic swordfish demand.

Response: In the 2012 BiOp, NMFS identified and analyzed the spillover effect as a potential indirect effect of the proposed action. Because data on foreign fisheries are incomplete, NMFS' estimates of foreign fishery interaction rates may be imprecise, and the expected number of sea turtle interactions with foreign fisheries that would be avoided by this action cannot be confirmed by direct observation. Thus, the precision of analyzing spillover effects is not the same as for the domestic fishery with 100 percent observer coverage. For those reasons, NMFS did not include numerical determinations of sea turtle mortalities that will be avoided because of the spillover effect in our quantitative PVA models.

NMFS focused the analysis on whether sea turtle populations benefit when U.S. swordfish production displaces the fishing activities of foreign fleets that are known to have higher turtle interaction rates in the same general area. Chan and Pan (2012) projected a global beneficial effect for sea turtles to

occur when the fishery fished at the effort level of 5,500 sets with a projected production of 5,461 mt of swordfish, and where there is a one-to-one displacement for the increased swordfish production, which is proportionally deducted from foreign fleets. Under these circumstances, Chan and Pan (2012) determined that an increase in swordfish production by the fishery from 1,761 mt to 5,461 mt would replace 3,700 mt of foreign swordfish production, which would result in a decrease in turtle interactions by 12 percent, or 221 individual turtles of all species combined.

Because leatherbacks represent about 40.2 percent of the turtles caught in the shallow-set fishery in the action area in the North Pacific, NMFS estimated that, in the Pacific Ocean, there would be 89 (221×40.2 percent) fewer leatherback interactions with longline gear from international fisheries at this level of increase in U.S. swordfish production. Similarly, because North Pacific loggerheads represent about 52.8 percent of the turtles caught by the shallow-set fishery, we estimated that there would be 117 (221×52.8 percent) fewer loggerhead interactions in longline gear from international fisheries at this level of increase in U.S. swordfish production.

Chan and Pan (2012) discussed in detail the methodology for identifying the one-to-one displacement of U.S. swordfish production to non-U.S. production. NMFS was conservative in

applying principles of economic analysis in the 2012 BiOp. For example, based on the fishery's potential effort level of 5,500 sets per year, and the expected one-to-one displacement of foreign swordfish production, the proposed action would result in 20-29 fewer leatherback sea turtle mortalities annually from displaced foreign swordfish production to meet U.S. demand, or an overall decrease in leatherback mortalities of 14-23 individuals annually from foreign longline fisheries in the central and North Pacific. Similarly for loggerheads, after accounting for the direct effects of the proposed action and the indirect spillover effects, the 2012 BiOp concluded that the proposed action would result in 22-47 fewer loggerhead sea turtle mortalities annually or an annual reduction of 15-40 loggerhead mortalities from foreign longline fisheries in the central and North Pacific. However, because the mortality reduction data associated with the spillover effect are not as robust as those analyzed for direct effects, we did not "offset" the direct effects of the proposed action (6 leatherback and 7 loggerhead total mortalities) in our quantitative PVA models, such that the fishery would effectively be credited for mortalities avoided from foreign fisheries. Similarly, the 2012 BiOp reached a no-jeopardy conclusion with and without considering the beneficial effects of spillover, and formulated

the ITS only on the expected adverse affects of the proposed action.

With respect to consumer awareness campaigns, NMFS maintains FishWatch (www.fishwatch.gov), a web site that provides consumers with easy-to-understand science-based facts to help make smart, sustainable, and healthy seafood choices. See the response to Comment 33.

Comment 35: NMFS should hold an independent review of the methods and findings in the 2012 BiOp.

Response: NMFS' information quality procedures do not require external peer review of biological opinions. However, some of the references in the 2012 BiOp were peer-reviewed, e.g., the Chan and Pan (2012) spillover effects paper, the Van Houtan and Halley (2011) climate-forcing publication, and the Van Houtan (2011) PVA models paper. Further, the Center for Independent Experts also reviewed the Chan and Pan (2012) Technical Memorandum on spillover effects.

Comment 36: The regulatory record establishes that, taken as a whole, the effects of the shallow-set fishery are beneficial to both leatherback and North Pacific loggerhead sea turtles.

Response: In the 2012 BiOp, NMFS identified and analyzed the spillover effect as a potential indirect effect of the proposed action. NMFS believes that the proposed action will

likely provide an overall benefit to sea turtle conservation by displacing the foreign effort of fisheries that follow less effective sea turtle mitigation measures. For further information regarding spillover effects, see the responses to Comments 33 and 34.

Comment 37: NMFS should issue its final rule in a timely manner so that regulation of the shallow-set fishery may resume in a way that is consistent with applicable science and law.

Response: NMFS agrees.

Comment 38: The theory underlying all market transfer analysis is basically sound in that in a global economy a change in a commodity chain in one region will often have ripple effects across other regions. However, unless it can be shown that the swordfish that are not caught by Hawaiian swordfish producers are caught by others, leaving total global production unchanged, then the case for increased turtle bycatch does not exist. This type of analysis would require detailed swordfish stock analysis and DNA testing to determine how many swordfish not caught by Hawaii's fishermen are caught by others, and the extent to which they augment existing production and do not simply displace it. None of the studies to date (Rausser et al. (2008) and Chan and Pan (2012)) have met this bar.

Further research should be conducted to truly determine the impacts of Hawaii's swordfish regulations on other non-U.S.

swordfish fisheries. Until this is done, it would be prudent not to make the case that increased Hawaiian swordfish production actually decreases sea turtle mortality, as there is no robust evidence to support such a claim. If the government wants to increase allowable swordfish catch in Hawaii for economic reasons they should not use the (as of now) specious argument that this will actually improve the conditions for the global turtle population.

Response: The study area in Chan and Pan (2012) on production displacement only considered the central and North Pacific. Peer-reviewed stock assessments have defined the great majority of the swordfish in this area as North Pacific swordfish, or as western and central Pacific and eastern Pacific swordfish under the two-stock scenario as described in a 2010 assessment of North Pacific swordfish.

Chan and Pan (2012) indicate that U.S. swordfish production displaces non-U.S. production in the central and North Pacific almost one-for-one. The coefficient of the equation (-1.04) implies that, on the margin, an increase of one unit of U.S. production causes a reduction of 1.04 units of non-U.S. production. For further information regarding spillover effects, see the responses to Comments 33 and 34.

Comment 39: NMFS' new biological opinion requires only observer coverage at rates that have been determined to be

statistically reliable for estimating protected species interaction rates onboard Hawaii-based shallow-set longline vessels. NMFS gives no further indication what that level might be. Without 100 percent observer coverage, NMFS must gather and analyze raw data from a subset of vessels, and come up with an estimate of take for the fishery as a whole. The combination of that uncertainty and reduced reporting by vessels without observers could easily translate into a significant increase in take that would not be immediately detected by NMFS.

Response: This final rule does not affect NMFS' placement of an observer on every shallow-set trip. In 2011, the Hawaii longline observer program cost the taxpayers about \$7.5 million, and the cost increases each year. NMFS must continually consider the cost of each of its scientific and management programs, including observers, while maintaining the programs' effectiveness. The Council has requested from NMFS an analysis of observer coverage levels for the shallow-set fishery that would continue to provide reliable estimates of turtle interactions, as an alternative to the current program.

Comment 40: NMFS has failed to establish critical habitat for North Pacific loggerheads as required under the ESA. As a result, increasing takes of this distinct population segment in the swordfish fishery must be delayed, if not abandoned, until

critical habitat is designated and the harm to the habitat from Hawaii longline swordfish operations assessed and mitigated.

Response: NMFS is not required to delay or abandon this final rule until a determination is made regarding critical habitat for North Pacific loggerhead sea turtles. In the joint USFWS-NMFS determination of nine distinct population segments of loggerhead sea turtles (76 FR 58858, September 22, 2011), the agencies found that critical habitat was not determinable at this time, and invited interested parties to provide information related to the identification of critical habitat for the two loggerhead sea turtle DPSs occurring within the United States. Accordingly, critical habitat will be proposed and evaluated, as appropriate.

Comment 41: NMFS must err on the side of conservation rather than swordfish expansion to ensure the survival and recovery of the endangered leatherback and North Pacific loggerhead sea turtles.

Response: NMFS is required to comply with a number of laws in managing this fishery, including the Magnuson-Stevens Act and ESA. This rule is consistent with the 2012 BiOp and all applicable laws. It is necessary to allow the fishery the opportunity to achieve optimum yield on a swordfish stock that is healthy and underexploited, while still maintaining important

conservation and management safeguards for sea turtles and other protected species.

Comment 42: In light of radiation from Japan and mercury contamination, NMFS should ensure that the fish caught in the Hawaii shallow-set fishery are safe to eat before allowing increased takes of sea turtles in the swordfish fishery to increase supplies of swordfish. Given that the loggerhead sea turtles captured in the fishery originate from Japan, NMFS should analyze the potential exposure to radiation from the nuclear disaster, its impacts on the population, and mitigation of those impacts by reducing bycatch of sea turtle species in this fishery.

Response: The U.S. Food and Drug Administration (FDA) and NMFS have high confidence in the safety of seafood products in the U.S. marketplace or exported U.S. seafood products.

At this time, there is insufficient information available on the potential effects of radiation on the North Pacific loggerhead sea turtles to determine what, if any, threat may exist. See the following websites for information about mercury in swordfish: www.hawaii-seafood.org/seafood-safety, www.fishwatch.gov/eating_seafood, and www.fda.gov/Food/FoodSafety/Product-SpecificInformation/Seafood.

Comment 43: Although demand for and consumption of swordfish in the U.S. from all sources, foreign and domestic, is

declining, NMFS seems to be attempting to subsidize a shrinking fishery with its efforts in Hawaii, American Samoa, along the U.S. West Coast and elsewhere in the Pacific without a clear need.

Response: NMFS is required to establish conservation and management measures that achieve, on a continuing basis, the optimum yield from each U.S. fishery. This includes North Pacific swordfish, a stock that is healthy, and producing yields below MSY.

Comment 44: NMFS should complete a new biological opinion and supplemental environmental impact statement that accurately assess the impacts of the fishery in the context of the serious threats and population declines facing leatherback and North Pacific loggerhead sea turtles.

Response: The comment does not provide any specific objection regarding NMFS' compliance with NEPA in preparing a Record of Environmental Consideration, such that it would allow NMFS to give meaningful consideration to the objection. Moreover, the 2012 BiOp presented and assessed the best available scientific and commercial information. Further, this final rule is within the range of actions analyzed in the prior environmental analyses, and there is no new information that would affect the decision on the environmental impacts of this action and analyses available. See the response to Comment 1

regarding compliance with ESA and the no-jeopardy conclusion in the 2012 BiOp.

Changes from the Proposed Rule

There are no changes to the proposed rule.

Classification

The Administrator, Pacific Islands Region, NMFS, determined that this rule is necessary for the conservation and management of the Hawaii-based shallow-set pelagic longline fishery and that it is consistent with the Magnuson-Stevens Fishery Conservation and Management Act and other applicable laws.

This action has been determined to be not significant for purposes of Executive Order 12866.

The Chief Council for Regulation of the Department of Commerce certified to the Chief Council for Advocacy of the Small Business Administration during the proposed rule stage that this action would not have a significant economic impact on a substantial number of small entities. The factual basis for the certification was published in the proposed rule and is not repeated here. NMFS received no comments or new information regarding this certification. As a result, a regulatory flexibility analysis was not required and none was prepared.

NMFS has determined that this action does not represent a substantial change to the action previously analyzed in the 2009 Final Supplemental Environmental Impact Statement on Amendment

18 to the Fishery Management Plan for Pelagic Fisheries of the Western Pacific Region, Modifications for the Hawaii-based Shallow-set Longline Swordfish Fishery (2009 FSEIS) (74 FR 65460, December 10, 2009, corrected at 75 FR 1023, January 8, 2010). NMFS has further determined that there are no significant new circumstances or information relevant to environmental concerns and bearing on the implementation of revised incidental interaction limits. A supplement to the 2009 FSEIS is, therefore, not required under NEPA.

This action does not conflict with the provisions implemented to protect migratory birds. On August 24, 2012, the USFWS issued a 3-year Special Purpose Permit that authorizes the shallow-set fishery to take, possess, transport, and import 191 black-footed albatrosses, 430 Laysan albatrosses, 30 northern fulmars, 30 sooty shearwaters, and one short-tailed albatross. If the fishery exceeds any of these take numbers, NMFS and the USFWS would consult, and may take appropriate action. The permit requires NMFS to report all seabird hookings and entanglements to the USFWS each year, and to continue to develop ways to reduce seabird interactions.

List of Subjects in 50 CFR Part 665

Administrative practice and procedure, Fisheries, Fishing,
Hawaii, Longline, Sea turtles.

Dated: October 1, 2012.

Alan D. Risenhoover, Director, Office of Sustainable Fisheries,
performing the functions and duties of the Deputy Assistant Administrator for Regulatory
Programs, National Marine Fisheries Service.

For the reasons set out in the preamble, 50 CFR Part 665 is
amended as follows:

PART 665--FISHERIES IN THE WESTERN PACIFIC

1. The authority citation for 50 CFR Part 665 continues to
read as follows:

Authority: 16 U.S.C. 1801 et seq.

2. In § 665.802, revise paragraphs (ss) and (tt) to read as
follows:

§ 665.802 Prohibitions.

* * * * *

(ss) Engage in shallow-setting from a vessel registered for use under a Hawaii longline limited access permit after the shallow-set longline fishery has been closed pursuant to §665.813(b), in violation of §665.813(i).

(tt) Fail to immediately retrieve longline fishing gear upon receipt of actual notice that the shallow-set longline fishery has been closed pursuant to §665.813(b), in violation of §665.813(i).

* * * * *

3. In § 665.813, revise paragraphs (b)(1) and (b)(2), and paragraph (i) to read as follows:

§ 665.813 Western Pacific longline fishing restrictions.

* * * * *

(b) * * *

(1) Maximum annual limits are established on the number of physical interactions that occur each calendar year between leatherback and North Pacific loggerhead sea turtles and vessels registered for use under Hawaii longline limited access permits while shallow-set fishing. The annual limit for leatherback sea turtles (Dermochelys coriacea) is 26, and the annual limit for North Pacific loggerhead sea turtles (Caretta caretta) is 34.

(2) Upon determination by the Regional Administrator that, based on data from NMFS observers, the fishery has reached

either of the two sea turtle interaction limits during a given calendar year:

(i) As soon as practicable, the Regional Administrator will file for publication at the Office of the FEDERAL REGISTER a notification that the fishery reached a sea turtle interaction limit. The notification will include an advisement that the shallow-set longline fishery shall be closed, and that shallow-set longline fishing north of the Equator by vessels registered for use under Hawaii longline limited access permits will be prohibited beginning at a specified date until the end of the calendar year in which the sea turtle interaction limit was reached. Coincidental with the filing of the notification, the Regional Administrator will also provide actual notice that the shallow-set longline fishery shall be closed, and that shallow-set longline fishing north of the Equator by vessels registered for use under Hawaii longline limited access permits will be prohibited beginning at a specified date, to all holders of Hawaii longline limited access permits via telephone, satellite telephone, radio, electronic mail, facsimile transmission, or post.

(ii) Beginning on the fishery closure date indicated by the Regional Administrator in the notification provided to vessel operators and permit holders and published in the Federal Register under paragraph (b)(2)(i) of this section, until the

end of the calendar year in which the sea turtle interaction limit was reached, the Hawaii-based shallow-set longline fishery shall be closed.

* * * * *

(i) Vessels registered for use under Hawaii longline limited access permits may not be used to engage in shallow-setting north of the Equator (0° lat.) any time during which the shallow-set longline fishery is closed pursuant to paragraph (b) (2) (ii) of this section.

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[FR Doc. 2012-24536 Filed 10/03/2012 at 8:45 am; Publication Date: 10/04/2012]